

WHAT IS CLAIMED IS:

1. An inverter power module for use in an electric and electronic product, comprising:

a power block;

an inverter block;

a mainboard on which the power block is arranged; and

a sub-board on which the inverter block is arranged, wherein the sub-board is mounted on the mainboard.

2. The module according to claim 1, wherein the power block comprises a plurality of first elements through hole-mounted on a front side of the mainboard and a sub-board mounting part for mounting the sub-board is provided on one portion on a front side of the main board.

3. The module according to claim 2, wherein the sub-board mounting part comprises at least one connector and the sub-board comprises a pin header corresponding to the connector.

4. The module according to claim 3, wherein the inverter block comprises second elements surface-mounted on one side of the sub-board.

5. The module according to claim 3, wherein the inverter block comprises second elements mounted on front and back sides of the sub-board.

6. The module according to claim 1, wherein the power block comprises a plurality of first elements through hole-mounted on a front side of the mainboard and a sub-board mounting part for mounting the sub-board is prepared on one portion on a back side of the main board.

7. The module according to claim 6, wherein the sub-board mounting part has a predetermined metal pattern and the sub-board has a pad corresponding to the metal pattern.

8. The module according to claim 7, wherein the inverter block comprises second elements surface-mounted on one side of the sub-board.

9. The module according to claim 7, wherein the inverter block comprises second elements mounted on front and back sides of the sub-board.

10. An inverter power module for use in an electric and electronic product, comprising:

a mainboard on which a plurality of first elements are through hole-mounted;

a sub-board on which a plurality of second elements are surface-mounted,

wherein a connector for mounting the sub-board in a through hole-mounting manner is provided on a side of the mainboard where the first elements are mounted, and a pin header corresponding to the connector is provided on the sub-board.

11. The module according to claim 10, wherein the first elements comprise a line filter; X-cap; Y-cap; a power-IC; an input rectifying block comprising a first switching FET; an output rectifying block comprising a diode, an inductor, and a capacitor; and a feedback circuit block comprising a photocoupler, a power transformer, and an inverter transformer, and

the second elements comprise a dimming element; an inverter-IC; a second switching FET; a third switching FET; a first protection element; and a second protection element.

12. An inverter power module for use in an electric and electronic product, comprising:

a mainboard on which a plurality of first elements are through hole-mounted; and

a sub-board on which a plurality of second elements are surface-mounted,

wherein a predetermined metal pattern for mounting the sub-board in a surface-mounting manner is formed on a back side of the mainboard where the

first elements are mounted and a pad corresponding to the metal pattern is provided on the sub-board.

13. The module according to claim 12, wherein the first elements comprise a line filter; X-cap; Y-cap; a power-IC; an input rectifying block comprising a first switching FET; an output rectifying block comprising a diode, an inductor, and a capacitor; and a feedback circuit block comprising a photocoupler, a power transformer, and an inverter transformer, and

the second elements comprise a dimming element; an inverter-IC; a second switching FET; a third switching FETs; a first protection element; and a second protection element.

14. The module according to claim 2, wherein the plurality of first elements are dual-in-line package-mounted on the front side of the mainboard.

15. The module according to claim 6, wherein the plurality of first elements are dual-in-line package-mounted on the back side of the mainboard.

16. An inverter power module for use in an electric and electronic product, comprising:

a power block;

an inverter block;

a mainboard on which the power block is arranged;

a sub-board on which the inverter block is arranged; and

means for releasably mounting the sub-board on the mainboard.

17. The module according to claim 16, wherein the power block comprises a line filter; X-cap; Y-cap; a power-IC; an input rectifying block comprising a first switching FET; an output rectifying block comprising a diode, an inductor, and a capacitor; and a feedback circuit block comprising a photocoupler, a power transformer, and an inverter transformer, and

the second elements comprise a dimming element, an inverter-IC, a second switching FET, a third switching FET, a first protection element, and a second protection element.

18. The module according to claim 16, wherein the means for releasably mounting the sub-board on the mainboard comprises one of a first mounting member and a second mounting member, wherein the second mounting member is complementary to the first mounting member, disposed on the sub-board, and another of the first mounting member and the second mounting member disposed on the mainboard.

19. A method for assembling an inverter power module, said method comprising:

substantially aligning a first mounting member disposed on a sub-board comprising an inverter block, with a second mounting member disposed on a mainboard comprising a power block;

releasably joining the first mounting member with the second mounting member.

20. The method as recited in claim 19, wherein the releasably joining comprises fastening the first mounting member to the second mounting member.

21. The method as recited in claim 20, wherein fastening the first mounting member to the second mounting member comprises through hole-mounting.